Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method ~~of providing synchronisation between~~ for synchronizing a plurality of base stations ~~(300)~~ in a telecommunications system ~~, the telecommunications system comprising~~ which includes a plurality of cells ~~(320)~~, each of ~~the plurality of~~ which cells ~~having~~ has one of the plurality of base stations and at least one mobile station ~~(310)~~ situated therein, the method ~~comprises the steps of~~ comprising:

a) providing at least one channel comprising time slots, ~~(210)~~ for usage in the plurality of cells;

b) transmitting a ~~synchronisation~~ synchronization signal in a given one of the at least one channel, the transmission being from each of the plurality of base stations to ~~those~~ remaining base stations within transmission range of each respective base station; [[and]]

c) for each ~~respective~~ base station, calculating respective time differences ~~($d_{a,b}$; $d_{a,c}$)~~ between corresponding time slots respective other base stations within transmission range of the ~~respective~~ base station; and [[.]]

d) adjusting timing of the synchronization signals of the respective base station according to calculated time differences;

wherein the at least one channel is a random access channel transmitted at a frequency within a band of frequencies that is provided for communications with mobile stations.

2. (Currently Amended) [[A]] The method according to Claim 1, ~~having the further steps of~~ comprising:

[[d)]] e) for each of the plurality of base stations, reporting the time differences calculated in step c) to a radio network controller;

[[e)]] f) calculating a ~~synchronising~~ synchronizing adjustment corresponding to each base station from the reported time differences;

[[f)]] g) informing each base station individually of the corresponding ~~synchronising~~ synchronizing adjustment calculated in step [[e);]] f); and

[[g)]] h) ~~synchronising~~ synchronizing each base station according to the corresponding ~~synchronising~~ synchronizing adjustment.

3. (Currently Amended) [[A]] The method according to Claim 1, ~~having the~~ further comprising ~~step of~~:

[[h)]] i) each respective base station acting autonomously on the time differences calculated in step c) by adjusting its ~~synchronisation~~ synchronization to ~~minimise~~ minimize the time differences.

4. (Cancelled)

5. (Currently Amended) [[A]] The method according to Claim [[4,]] 1, wherein the random access channel comprises a time slot per TDMA frame.

6. (Currently Amended) [[A]] The method according to Claim 5, wherein the random access channel is allocated to uplink transmissions in order to initiate communications.

7. (Currently Amended) [[A]] The method according to Claim 6, wherein communications are initiated by requesting a resource unit for uplink usage.

8. (Currently Amended) [[A]] The method according to Claim 5, ~~having the~~ further comprising ~~step of~~:

[[i)]] j) allocating ~~the utilisation~~ utilization of each random access channel time slot for base station ~~synchronisation~~ synchronization according to a schedule.

9. (Currently Amended) [[A]] The method according to Claim 5, ~~having the~~ further comprising ~~step of~~:

[[j)]] k) using a second channel [[one]] of said at least one ~~channels~~ channel to silence uplink communications in the random access channel time slots to allow the transmission of ~~synchronisation~~ synchronization transmissions from each respective base station to other base stations.

10. (Currently Amended) [[A]] The method according to Claim 9, wherein the second channel is [[the]] a broadcast control channel.

11. (Currently Amended) [[A]] The method according to Claim [[4,]] 1, wherein the random access channel time slot used is always contained in a fixed numbered frame within a plurality of multi-frames in order to ~~synchronise~~ synchronize the plurality of base stations over multi-frames.

12. (Currently Amended) A method of locating a mobile station within a telecommunications cell forming part of a telecommunications system wich includes a base station and at least one mobile station, the method comprising ~~the steps of~~:

determining the location of at least three base stations;

scheduling ~~synchronisation~~ synchronization measurements for each of the base stations ~~utilising~~ utilizing a random access channel;

transmitting a signal from the mobile station;

receiving the transmitted signal at each of the three base stations;

comparing the received signals with timing signals in each of the base stations; and

using the comparison at each base station to determine the location of the mobile station.